Emergency Escape and Rescue Openings

The 1989-1993 annual average for fire deaths due to fires in homes was close to 4000 people; in addition the annual average for injuries due to fires in homes during this same time period, was 21,000. It is because of these figures for deaths and injuries, that the building codes require a means for emergency escape or rescue from specific parts of the house. Very few people have the necessary training and equipment to fight a fire in a house; when there is a fire emergency, evacuation of the occupants is the primary strategy to prevent injury or death.

Because a person who is asleep is usually unaware of when a fire begins, an emergency means of escape from a bedroom is required. A fire which begins outside the bedroom often blocks the normal egress path, and leaves the occupants with no alternative but a window or door which opens directly to the outside of the house. Although a person who is occupying a habitable space in a basement may not be asleep, an emergency escape route from the basement is required because a fire in the upper level can render that space unusable as a path of escape from the house.

The importance of early fire warning (smoke detectors) and an emergency escape path, provides the best defense against injury or death due to a fire emergency in a house. For people who because of age or physical condition, are unable to exit during a fire emergency, the emergency escape and rescue opening(s) will provide access for trained fire fighters to enter the house and get people out.

Building Code Requirement: Every sleeping room, and every basement with a *habitable space,* shall have at least one approved emergency escape and rescue opening.

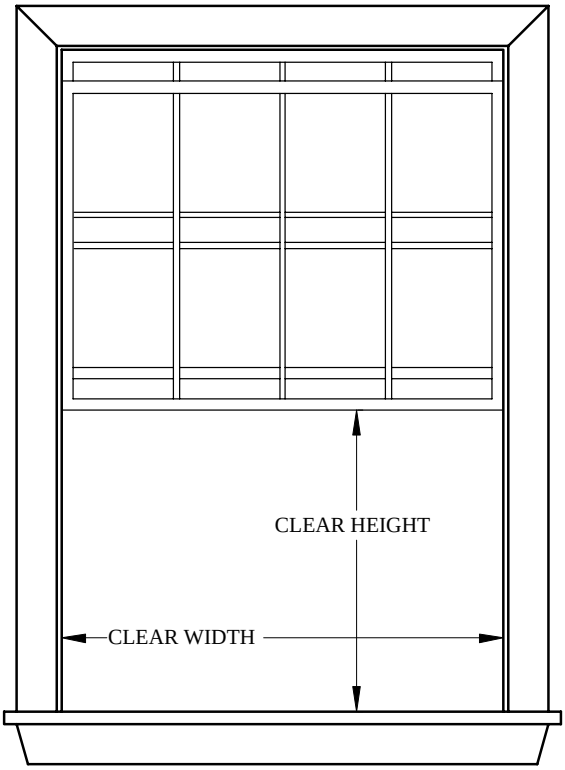
This provision of the building code applies to all new construction such as new houses, new additions to houses, newly created habitable spaces in a previously unfinished basement, a storage area converted to a sleeping room, and similar construction.

Emergency escape and rescue openings in existing houses shall be maintained to the requirements of the building code which was in effect when the house was built. No alterations to a house are required, provided the house is maintained to the building code requirements when the house was built.

Houses which were built before the Uniform Statewide Building Code (USBC) was first adopted (September 1, 1973), shall be maintained to the construction requirements at the time they were built. No alterations to a house are required, provided the house is maintained to the construction requirements when the house was built, ***unless an unsafe or unfit condition exists.***

A *habitable space* is a space in a house for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.

An emergency escape or rescue opening can be a door which opens directly to the outside of the house, or an approved window which opens to the outside of the house.

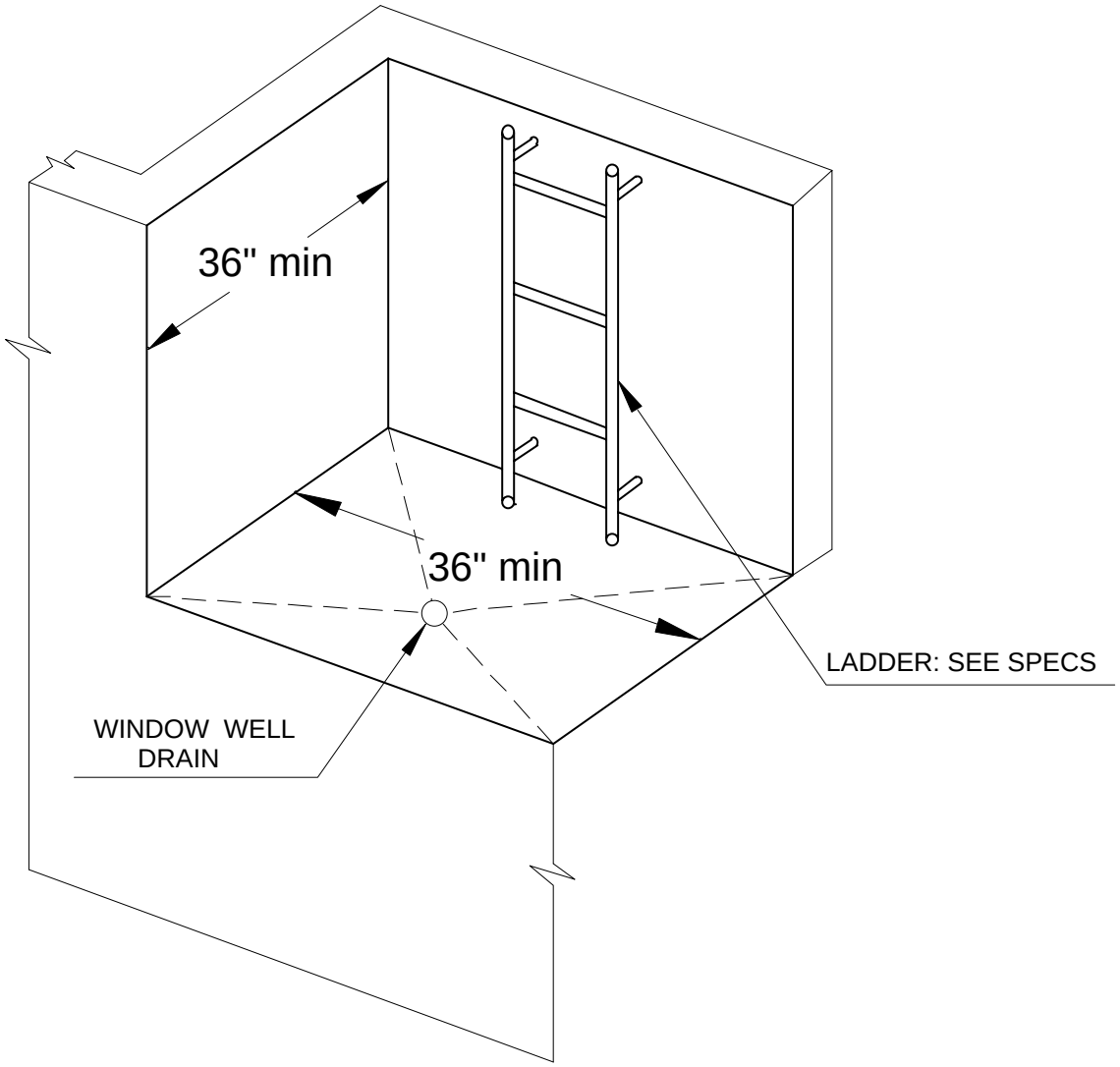


Requirements for an Emergency Escape Window

An emergency escape window (or door which opens directly to the outside of the house) is required in every bedroom, or habitable basement. In the event of a fire, this window (or door) will allow people to escape, and/or allow firefighters to get into the house to rescue people.

1. The minimum clear opening height shall be 24".
2. The minimum clear opening width shall be 20".
3. **The minimum clear opening <u>area</u> shall be 5.7 ft^2.** Multiply the clear width **x** the clear height to calculate the clear opening area. Note: An opening of 24" x 20" will have an area of 3.33 ft^2, which is not large enough.
4. **A grade level window may have a clear opening area of 5.0 ft^2**. A grade level window is one which a person can enter or exit from the ground outside, without a ladder.
5. The clear opening is measured with the lower sash in the raised position. If the window sashes tilt out and can be removed without the use of tools, the clear opening may be measured with the sashes removed, and the area calculated from these measurements.
6. The window sill may be a maximum of 44" above the floor.
7. Other types of windows such as sliding or casement, may also be used. With the operable part(s) of the window in the fully open position (or removed), the clear width, height and area can be determined.
8. An emergency escape window with a finished sill height below the adjacent ground elevation, shall be provided with a window well. See the next page for minimum requirements for this window well.

Window Wells



R310.2 Window wells. Window wells required for emergency escape and rescue shall have horizontal dimensions that allow the door or window of the emergency escape and rescue opening to be fully opened. The horizontal dimensions of the window well shall provide a **minimum net clear area of 9 square feet** with a minimum horizontal projection and width of 36 inches.

> **Exception:** The ladder or steps required by Section R310.2.1 shall be permitted to encroach a maximum of 6 inches into the required dimensions of the window well.

R310.2.1 Ladder and steps. Window wells with a vertical depth greater than 44 inches below the adjacent ground level shall be equipped with a permanently affixed ladder or steps usable with the window in the fully open position. Ladders or steps required by this section shall not be required to comply with Sections R314 and R315. Ladders or rungs shall have an inside width of at least 12 inches, shall project at least 3 inches from the wall and shall be spaced not more than 18 inches on center vertically for the full height of the window well.